10/509163

10/PRTS.

DT09 Rec'd PCT/PTO 27 SEP 2004

BROADBAND SLOT ARRAY ANTENNA

T.H. This application is a 371 of PCT/KR04/02444 file 09/24/2004.

Technical Field

The present invention relates to a broadband slot array antenna, in which a common slot communicates with a plurality of half slots to minimize a distance between array elements of the antenna while increasing its gain and realizing a specific radiation pattern.

Background Art

A typical radio wave antenna essentially performs two functions simultaneously or alternately, and in a transceiver system, the two functions may be achieved by the same antenna or by separate antennas. That is, as a transmitting antenna, an antenna generates a radio wave by radiating into the atmosphere an electrical signal produced by an electronic circuit; and as a receiving antenna, an antenna receives from the atmosphere such a radio wave for conversion into an electrical signal by a receiver circuit. For example, an antenna for receiving a television broadcast converts a broadcast radio wave into a current signal, which is then input to a television receiver.

Assuming that antenna characteristics, such as directional properties and operating frequency, are appropriate for a transmission (radiation) of radio waves, the reception of such radio waves by the same antenna follow the same characteristics. Hence, for the sake of convenience in explaining antenna operational principles and overall antenna theory, a transmitter antenna is frequently presumed to be a receiver antenna as well, such that antenna components such as radiating elements and feed lines are generally termed based on a transmitting operation. That is, an electrical signal output from a transmitter circuit is supplied to a feed line, which in turn supplies the signal to a radiating element, so that the radiating element can radiate a radio wave

BEST AVAILABLE COPY